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Foundation and Development of Local Trimble User Groups: Perspectives From the Beginning

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ABSTRACT

On August 17th, 1993 the "First Pathfinder User's Group" was formed. The first meeting was held in Tallahassee, Florida and brought together Trimble Pathfinder global positioning system (GPS) users from Florida and Southern Georgia. The group was founded on several simple objectives. The first objective was to create a forum for local users to meet, exchange information and ideas, get needed help, and to provide help for others. The second objective was to provide guidance and constructive feedback directly to Trimble Navigation. The third and final objective was to keep it simple, employing only basic bylaws and no dues or fees. The group meets twice annually; the first meeting is a small technical seminar where local users give short presentations on interesting aspects of their work. The second meeting is business oriented with group discussion, a short instructional seminar on a subject decided upon by the group, and a presentation by a Trimble representative demonstrating the latest innovations in Trimble mapping GPS hardware and software.

There are currently two Trimble user groups, the Florida/Southern Georgia group and South Carolina group. Direct feedback from the groups has brought about both the Certified Trainer Program and the release of MCORR400 (long baseline differential software) as a stand alone program. The two existing groups have been successful, with 51 active members in the Florida/Southern Georgia group and 35 in the South Carolina group. These groups have demonstrated the effectiveness of such a forum and can provide the basis for the formation of other groups.

INTRODUCTION

The global positioning system (GPS), run by the United States Department of Defense, was originally designed and intended for military use. A civilian market has emerged and embraced this technology, becoming so dominant that the United States Department of Defense is going to turn selective availability off in the near future (Press release, The White House, March 29, 1996). Turning selective

availability off will streamline many current applications and create new ones, potentially increasing the overall number of GPS users. The increase in GPS awareness has driven the maturation of user application, which in turn has caused a need for increased functionality and accuracy of GPS receivers. Common GPS capabilities now include: real time differential corrections, phase processing, long baseline differential correction, ability to display coordinates in multiple datums and coordinate systems in the field, offset coordinate entry (laser range finders), and many other advanced features. The increased number of users coupled with these advancements and complexities inherent in the GPS environment, create a strong demand for convenient and innovative information exchange that local GPS user groups can help provide.

Trimble Navigation was one of the original contractors building military grade GPS receivers and has been a dominant manufacturer in the civilian market. Today Trimble Navigation has the largest market share in the GPS industry (Geographic Technology Markets in GIS World, June 1995, Vol.8 No. 6); there is more Trimble equipment being used today than any other manufacturers in the industry. This fact makes it easy to form functional Trimble user groups many places in the world.

By participating in GPS user groups, members will become more aware of GPS capabilities and opportunities, meet people with similar interests and needs, expand business opportunities, and provide Trimble with valuable information they need to engineer better GPS equipment. There are currently only two Trimble user groups in the United States, the Florida/Southern Georgia group and the South Carolina group. With only two existing groups, there are many opportunities for others to get started. These groups are a tremendous resource for Trimble Navigation and have potential to influence the entire GPS industry.

DEVELOPING A GPS USER GROUP

There are a few main ingredients that are necessary for starting a Trimble GPS user group. The first is a region that has enough Trimble Navigation users to support a group. The second ingredient and most important, is a person that is willing to organize and set up the first meeting. The third is a regional Trimble employee who has a listing of users that can be invited to the first meeting. The number of users can vary widely depending on the region. The important factor is that there are enough users to support each other and to keep the group together and moving in a positive direction. The person who takes the initiative and set up the first meeting is really the key to starting the group. If the group is successful, this person in all likelihood will be the first president. The Trimble representatives involvement is not over after the list of names is handed over. This person will be called on yearly to give an update on Trimble's latest updates and products as well as perform liaison duties between the group and Trimble Navigation.

The first meeting can take a number of formats, but it is important to spend time as a group discussing business issues. This discussion will most likely be a lengthy one. Some of the issues to discuss will be: region to include and cover, meeting locations, number of times to meet each year, time of the year to meet, number and type of officers, and dues and bylaws.

THE FIRST PATHFINDER USER GROUP

The "First Pathfinder Users Group" meeting was held in Tallahassee, Florida on August 17th, 1993. This first meeting brought together Trimble Pathfinder GPS users from Florida and Southern Georgia. The meeting began with a series of short seminar papers (from members of the proposed group) highlighting specific GPS user applications and ended with a discussion focusing on business issues to get the group started. The morning presentations were useful, giving the group an idea about the range of applications in the region and who was involved currently with those applications. The entire afternoon was spent dealing with business issues. As a group, we were able to determine most of the critical issues needed to go forward as the first Trimble user group. We decided to call our group the "First Pathfinder User Group" because it was the first such group and focused on supporting Trimble mapping grade GPS receivers, known as the pathfinder product series. The group also decided to guide itself using only the simplest bylaws, paying no dues, so that the group could concentrate on its central purpose and not get side tracked by other issues.

The group decided to meet twice annually, trying to hold meetings in locations that are convenient for all group members. The first meeting (in the spring) would be business oriented, with group discussion, a short instructional seminar (subject decided upon by the group), and a presentation by a Trimble representative demonstrating the latest innovations in Trimble mapping GPS hardware and software. The second meeting (in the fall) would be a small technical seminar where local users give short presentations on interesting aspects of their work.

DISCUSSION AND CONCLUSION

In the early 1990's the southeast had a very high density of people using Trimble Navigation mapping grade GPS receivers and basestations. Few of these users communicated with one another and were aware of how they could help each other. There was a strong need to increase user awareness and gather users with and without basestations together to facilitate data sharing. The first meeting brought southeastern users together, many of which had been exchanging data prior to the meeting but had never

meet face to face. The user community has grown stronger in the southeast because of the two user groups. Most users now know each other, know the operators and the locations of available base stations, and are aware of the range of applications being carried out in their region.

The meetings draw strong attendance, with 51 active members in the Florida/Southern Georgia group and 35 in the South Carolina group. At each meeting, suggestions are recorded by each user on an official Trimble form. The suggestions are then considered by Trimble Navigation for their merit and potential for incorporation into their next update or upgrade. Many of the groups' suggestions have been incorporated by Trimble. The largest of which were creation of the Certified Trainer Program and the release of MCORR400 (long baseline differential software) as a stand alone program. Because these suggestions have been incorporated by Trimble Navigation, the groups have indirectly influenced the entire GPS industry.

There are still many challenges ahead for the existing groups. One of the largest challenges for the "First Pathfinder Users Group" is meeting location. Because of the geographic extent of Florida and Georgia it is very difficult to find a neutral location that is reasonable for all users. Another challenge is keeping advanced users involved and interested in the group. Not collecting dues has created another problem. There is no money available for renting meeting space. The "First Pathfinder Users Group" has partially solved this problem by borrowing space from "The Florida Joint Geographic Information and Mapping Conference" for the business meeting. This meeting is held in Central Florida during the spring of each year. The other meeting moves around wherever appropriate space is available each fall.

Both of the existing groups have demonstrated the effectiveness of this type of forum for supporting GPS users' needs in the southeast. With only two existing groups, there are lots of opportunities for the formation of others. The formation of additional groups would bring the potential to start a users council. The council would meet on an annual basis and would consist of at least one representative from each local/regional user group. The council would expand the voice of each user group, provide continuity and communication between users groups, and increase the significance of suggestions made to Trimble Navigation.

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REFERENCES

President Opens Door to Commercial GPS Markets; Move Could Add 100,000 New Jobs to Economy by Year 2000. White House Press Release. 1996 March 29.

Trimble Leads GPS Receiver Market. GIS World. June 1995. Vol. 8 No. 6.

Trimble Surveying & Mapping Users Conference & Exposition, Conference Proceedings 1996. User Application Papers. pp. 91-94. Trimble Surveying & Mapping Division, Sunnyvale, California.